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Growing a Competent Workforce in a Rural State: The University of Kentucky Bell Addiction Medicine Scholar Program

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Objectives

1. *Discuss evidence showing need for medication treatment for Opioid Use Disorder (MOUD) in rural communities*
2. *Describe ways to increase access to MOUD for people in rural communities*
3. *Describe the importance of clinical training for those who may interact with patients who use opioids*
4. *Outline details of one training program in Kentucky and its relevance to needs of rural communities*

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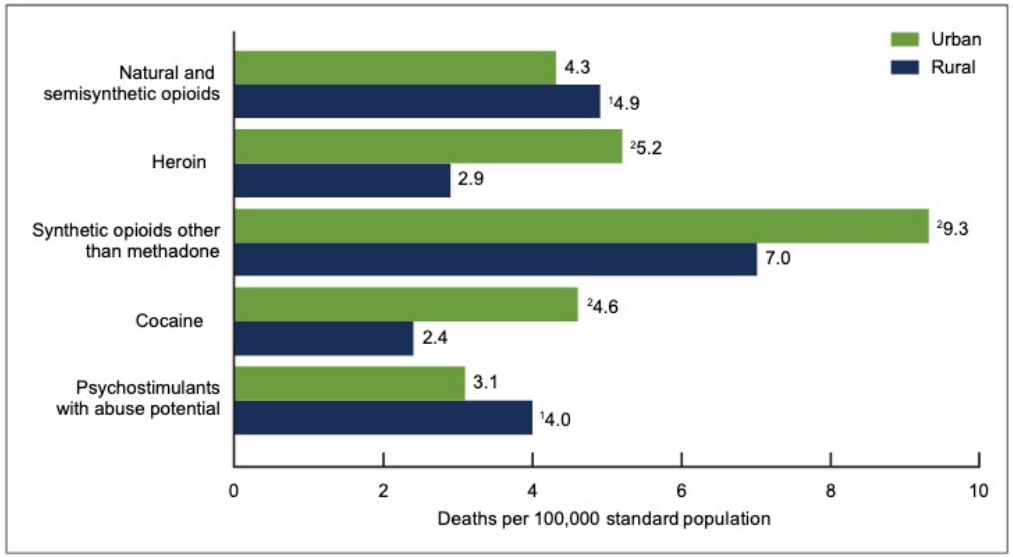
MOUD Treatment Need in Rural Areas: Indicators of Need

Figure 4. Age-adjusted drug overdose death rates, by types of drugs involved and by urban and rural residence, 2017



[1]Significantly higher than urban rate, $p < 0.05$.
[2]Significantly higher than rural rate, $p < 0.05$.
NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying-cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Deaths involving specific drugs or drug types were identified using multiple-cause-of-death codes: natural and semisynthetic opioids, T40.2; heroin, T40.1; synthetic opioids other than methadone, T40.4; cocaine, T40.5; and psychostimulants with abuse potential, T43.6. Deaths involving more than one drug (e.g., a death involving both heroin and cocaine) were counted in both categories. In 2017, at least one specific drug was identified in 88% of drug overdose deaths. Decedent's county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db345_tables-508.pdf#4.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Opioid involved overdose death rates high in rural areas

https://www.cdc.gov/nchs/data/databriefs/db345-h.pdf

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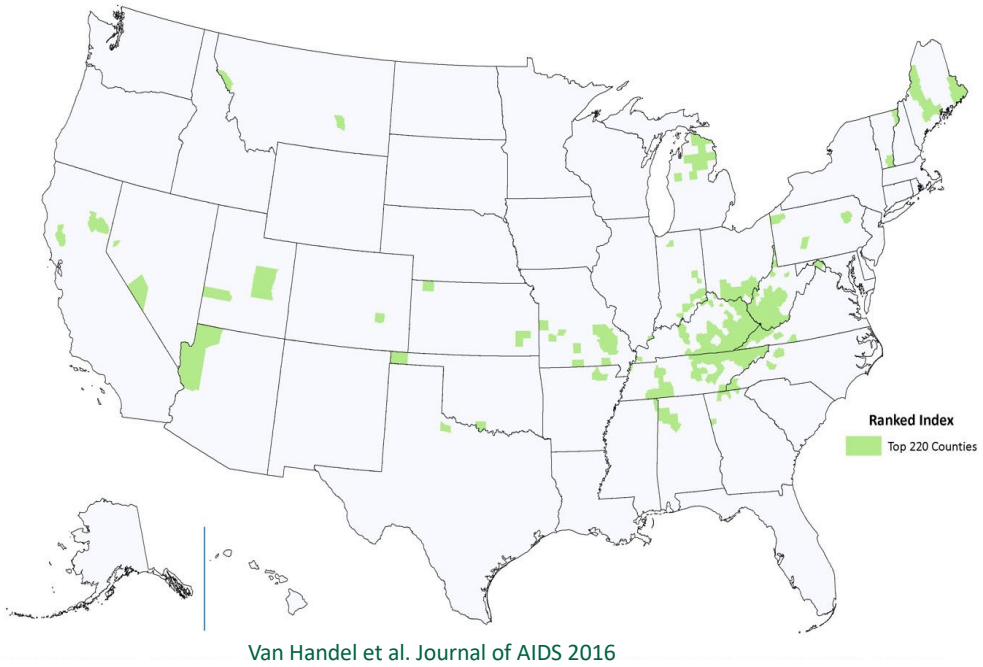

Van Handel et al. Journal of AIDS 2016

- Counties most vulnerable to rapid HIV spread if HIV introduced: 220 counties in 26 states
- Many are rural!
- Underlying risk factors include injection drug use, which is often opioids

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MOUD Treatment Need in Rural Areas: Indicators of Need

Perspective

Putting Parity into Practice — Integrating Opioid-Use Disorder Treatment into the Hospital Setting

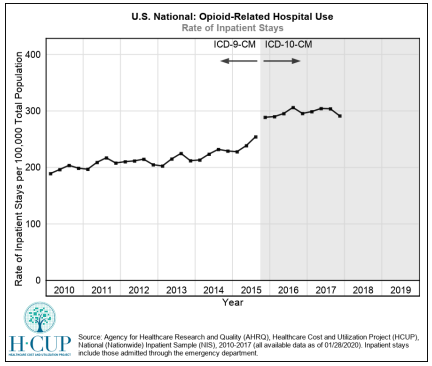
Laura Fanucchi, M.D., M.P.H., and Michelle R. Lofwall, M.D.
N Engl J Med 2016; 375:811-813 | September 1, 2016 | DOI: 10.1056/NEJMp1606157

Teachable Moment

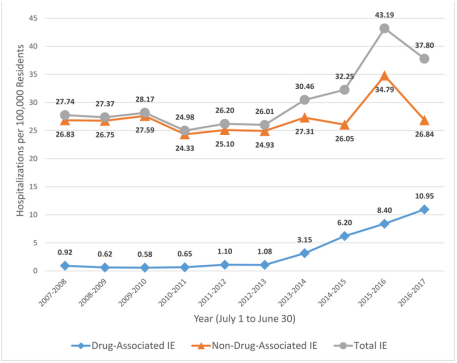
Treating the Symptom but Not the Underlying Disease in Infective Endocarditis
A Teachable Moment

David P. Serota, MD; Colleen S. Kraft, MD, MSC; Melissa B. Weimer, DO, MSC
JAMA Internal Medicine July 2017 Volume 177, Number 7

Opioid-related Hospitalizations



Endocarditis Hospitalizations - NC



- Signs of untreated OUD abound
- Serious injection related infections driving hospital admissions
  - Osteomyelitis
  - Endocarditis
  - Pulmonary abscesses
  - Skin and soft tissue infections
  - Mycotic aneurysms
  - Bacteremia/sepsis
  - Myositis

Ann Intern Med. 2019 Jan 1;170(1):31-40. Sinkman and Dorchak
Using ADA to Reduce ODs DOJ J of Fed Law Prac 2022

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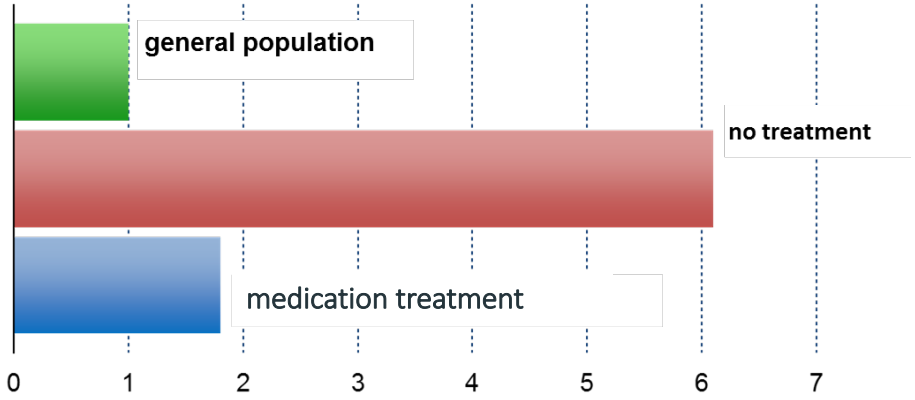
MOUD Treatment Need in Rural Areas: Because Methadone and Buprenorphine Save Lives & So Few Receive It

> 50%*

Reduction In Death Compared to People not on MOUD



*For buprenorphine and methadone

Standardized Mortality Ratio

Dupouy et al., 2017; Evans et al., 2015; Sordo et al. 2017

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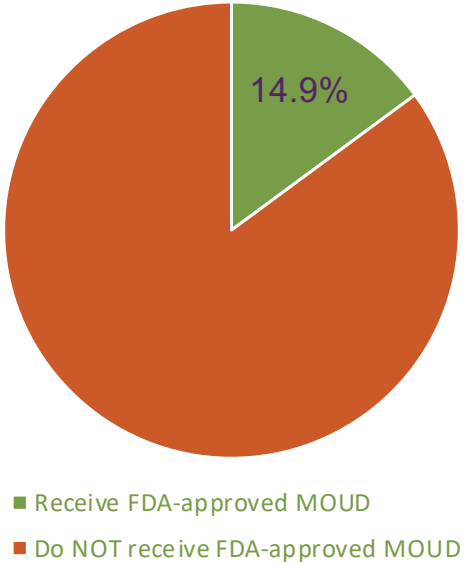
MOUD Treatment Need: Because It Is Underutilized

A recent large scale retrospective review found that **only 14.9%** of patients with OUD receive FDA-approved medication for opioid use disorder

- 12.5% buprenorphine or methadone
- 2.4% naltrexone



Wakeman 2020

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Ways to Increase MOUD Access in Rural Areas

- Think about the rural area you are wanting to help
- Why is that rural area struggling?
- Where is the lack of health literacy and where is the stigma?
- Each rural area is unique - must engage with the community and identify their strengths and weaknesses.
  - Do they have a syringe support program? A jail or a detention center?
  - Do they have any current MOUD providers? A hospital? An emergency department?
  - Health provider/system – inadequate number or adequate number but unwilling/unable for some reason? Availability along the continuum of where patients may go in the rural area– e.g., outpatient, inpatient, long-term care, jail
  - Community level/state level policy issue? [ex: CJ/ Dept of Corrections/ Drug Court Judges]
  - Develop strategic plans to address the gaps in MOUD access

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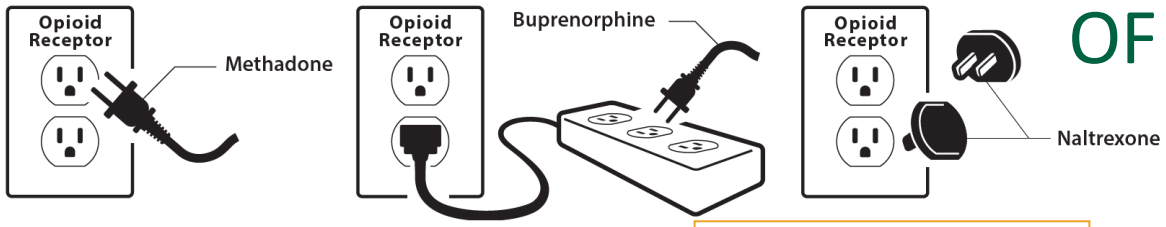
Health Literacy: How do the 3 medications work?

Methadone is like a regular plug that fully activates the receptor.

Buprenorphine is like a plug in a power strip that partially activates the receptor.



Methadone and **buprenorphine** plug into the receptor in the brain. They treat withdrawal, cravings, and pain.

Naltrexone is like a plug cover that blocks the receptor without activating it. Naltrexone can't be used for about 7 to 10 days after opioid use. Overdose risk is high during that time.

MOUD AS A FOUNDATION OF TREATMENT

REMISSION

RECOVERY

Part of the HEALing Communities Study: "MOUD Flyer"

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Anti-stigma Campaigns: Lived Experience with Methadone

- Advertising and media message are critical
- Our patients/clients who succeed are often silent/hidden allowing stigma to continue
- These are ads from KY communities – our rural communities wanted to feature their own residents

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Lived Experience with Buprenorphine

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Ways to Increase MOUD Access in Rural Areas

- Once identify barriers – make choice of which medication to focus on:
  - Buprenorphine (a few ideas beyond Hub & Spoke):
    - Increase buprenorphine telemedicine access in areas with no/few waivered providers
    - Expand use of monthly buprenorphine
  - Methadone (and buprenorphine): Increase number of medication units when inadequate number of licensed opioid treatment programs
- Longer term solution: train the doctors who are most likely to go work in the target rural areas
- Every solution needs to address stigma

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Importance of Physician Clinical Training for Working with Persons Who Use Opioids (PWUO)

- "In a cohort of adults in Kentucky who initiated buprenorphine treatment for OUD between January 2017 and November 2019, 689 (1.38%) patients died during the one year follow up. There were 459 deaths from an underlying cause other than opioid-related overdose, two times the number of deaths due to an opioid-related overdose (n=227). This finding confirmed our expectation that patients with OUD have many other co-morbidities and are at higher risk for mortality from causes other than opioid-related overdose."[1]
- *Given this and the ongoing national opioid epidemic, how COVID worsened the opioid epidemic --- clear need for physicians well-trained in basics of addiction medicine – not just a few physicians but all physicians*
- Clear rural workforce training needs within primary and specialty care along the continuum of care

Lei F, Moga D, Slade E, Hammerslag L, Dasgupta N, Lofwall M, Freeman P, DiPrete B, Slavova S. Patterns of Buprenorphine Initiation Treatment for OUD and Association with Opioid-related Overdose Deaths. Oral session at: ISPE's 38th International Conf.on Pharmacoepidemiology and Therapeutic Risk Management; 2022 August; Denmark

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Importance of Physician Clinical Training for Working with Persons Who Use Opioids (PWUO)

- KY Opioid Response Effort training of health care students: waiver training at University of Kentucky offered to medical students, residents, fellows and attendings in family medicine, emergency medicine, internal medicine, med-peds, psychiatry (adult and child), OB-GYN including high risk maternal fetal medicine fellows at campuses in Lexington, Bowling Green and Morehead. Added in nurse practitioner and physician assistant students in the last two years.
- Developed a questionnaire aimed at measuring clinician stigma towards PWUO and the MOUD treatments (e.g., willingness to treat and/or refer) and administered to our waiver training attendees prior to 4 hours of live in-person training (part of SAMSHA AAAP ½ and ½) .

Brown RL, Batty E, Lofwall M, Kiviniemi M, Kizewski A. Psychometric evaluation of two indices assessing stigma toward opioid misuse and treatment among health care providers. Am J Drug Alcohol Abuse. 2022 Mar 4;48(2):158-164. doi: 10.1080/00952990.2021.2007260. Epub 2022 Jan 31.

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CLINICIAN BELIEFS TOWARDS PWUO

Table 2

Results of Factor Analysis for Stigma of Opioid Misuse Index

Index items	Factor loadings: Factor 1	Factor loadings: Factor 2	Uniqueness
I think most people who use illicit opioids:			
Are to blame for their problems	.696	−.207	.543
Are unpredictable	.681	−.355	.296
Will not recover or get better	.860	−.151	.261
Are unable to get or keep a regular job	.751	−.023	.337
Are dirty and unkempt	.923	−.147	.186
Are dangerous	.871	−.306	.241
Cannot be trusted	.791	−.224	.373
Are below average in intelligence	.806	−.276	.349
Are unable to take care of themselves	.891	−.224	.206
Are disgusting	.754	−.254	.432

Note. $N = 144$. Items are presented in the order they appeared in the survey. Factor loadings obtained from maximum-likelihood factor analysis.

CLINICIAN WILLINGNESS TO PROVIDE OR REFER to MOUD

How comfortable are you providing patients with referrals to MOUD treatment?

Willingness to treat based on 3 questions asking how comfortable they are in:

(a) screening patients for MOUD treatment;
(b) discussing the inclusion of MOUD in a treatment regimen with patients; and
(c) administering MOUD treatment to patients.

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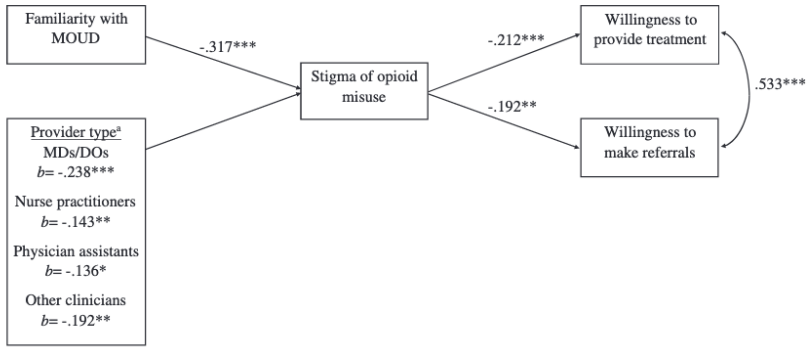
Importance of Physician Clinical Training for Working with Persons Who Use Opioids (PWUO)

- N=144 clinicians in training and attendings (age 22-68, 30% female)

Figure 1

Structural Equation Model Relating Provider Background to Stigma of Opioid Misuse and MOUD Healthcare Decisions



Note. Model fit statistics: CFI = .879; RMSEA = .009; SRMR = .053. Standardized (β) coefficients are reported. MOUD = medication for opioid use disorder; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.

[a] Medical students or residents serve as the reference category.

* $p < .05$. ** $p < .01$. *** $p < .001$.

-During in-person trainings, use fishbowl to reinforce engagement from learners in cases.
-Misinformation present in learners.
-Learners who hold stigmatizing views towards PWUO are less likely to provide MOUD and to refer to MOUD.
-Now looking to see if this training can change these stigmatizing views.

Brown RL, Batty E, Lofwall M, Kiviniemi M, Kizewski A. Opioid use-related stigma and health care decision-making. Psychol Addict Behav. 2022 Mar 28. doi: 10.1037/adb0000830. Epub ahead of print.

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The Bell Addiction Medicine Scholar Program

- The Bell Family established an endowed Alcohol and Addictions Chair
- Annual call for applications from clinical physician faculty committed to expanding their own clinical knowledge and care of persons with substance use within their area of clinical practice
- Endowment funds used to pay for 10% effort /salary for the scholar
- Goal is to grow educated physician faculty who train our current and future workforce and improve screening, prevention and treatment of substance use along the continuum

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Bell Scholar Benefits and Expectations

- Complete a scholarly project such as an internal quality improvement project, curriculum development (e.g., development of a bedside educational activity, objective structured clinical exam with standardized patients, didactic or webinar that can be delivered to residents, fellows and/or medical students)
- Become DATA waivered (do the 8-hour waiver training)
- Rotate through Addiction C/L service, Bridge Clinic and visit 2 OTPs
- Attend an annual national clinical meeting pertaining to substance use disorders
- Minimum of bimonthly mentoring

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Why Should The Bell Scholar Help Rural Parts of KY?

- University of Kentucky (UK) is the level 1 trauma center – it gets referrals from everywhere east of it --- Appalachia (endocarditis, etc.) so patients in our hospital system are often rural residents
- The scholars are the teachers to the UK medical students (n=718) and residents (n=807) who often from KY and intend to stay in KY.
- "The University of Kentucky is the University FOR Kentucky" President Eli Capiluto
- "The College of Medicine educates *medical students* in *Kentucky*, for *Kentucky*, with one integrated curriculum utilized at four campuses across the Commonwealth." [so if scholars can influence curriculum – they are influencing it broadly]

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The 1st Bell Scholar (2019): Dr. Sarah Marks /Family Medicine

Associate Residency Director

- Developed new didactic with role-playing for residents on learning to identify OUD within patients with chronic pain and when/how to prescribe opioid analgesics
- Added in waiver training as required for all FM residents
- Developed new AUD And OUD protocol to utilize naltrexone and active referrals to UK Bridge Clinic (she tried and failed) to get buy-in to start buprenorphine treatment
- Overall, secured 10 hours of residency instruction (e.g., didactics) in substance use disorder for incoming 2020 family medicine residents

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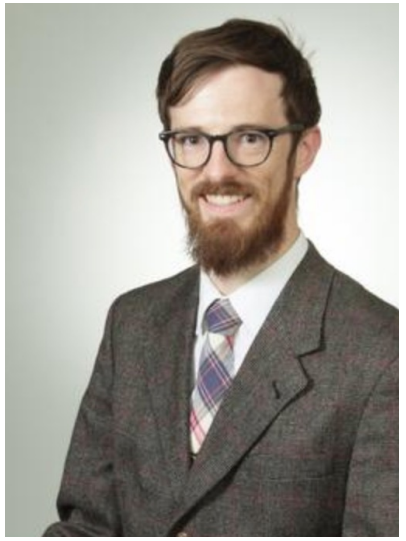
The 2nd Bell Scholar (2020-2021): Dr. Thaddeus Salmon III Internal Medicine-Pediatrics



Assistant Professor Polk Dalton Clinic – treats primarily Medicaid patient populations

- Developed new outpatient tobacco screening and medication treatment health literacy materials for patients and providers (translated into Spanish), EPIC order sets. He increased tobacco screening by over 50%
- Added in a waiver training for the outpatient med-peds clinic
- Started the *Journey Clinic* --- a primary care clinic also providing transmucosal buprenorphine treatment for stabilized patients (becoming a spoke to UK Bridge hub)
- Since his scholar year, became the clinical course director for the Intro to Clinical Medicine Course medical student course.
- Presented about the Journey Clinic at 2022 Gold Virtual Humanism Conference: **Healing the Heart of Healthcare Reimagining: How We Listen Connect and Collaborate.**

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Rural Implications of Bell Scholar Program

Rural barriers and solutions:

- Lack of educated graduating medical students, residents and fellows
- Each state medical school often trains doctors who go on to work in their state
- Each state medical school could benefit from a Bell Scholar-like Program
  - Buying out 10% of the scholar's time
  - Buying out 5% of the mentor's time
  - Goes on CV – real work products that can be used for promotion dossiers

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The Current Bell Scholar (2022): Dr. Anna-Maria South Division of Hospital Medicine

Health Equity and Advocacy Thread Leader for the College of Medicine, which is aimed at enhancing medical student curriculum to increase the focus on social determinants of health and cultural humility

- Developing interactive lecture series for medical students, residents & attending physicians about the importance of treating OUD among hospitalized incarcerated persons and ways to facilitate, promote and implement addiction treatment in the hospital setting.
- Part of a team who convinced Division of Hospital Medicine to require all its providers to become X-waivered
- Advocating against automatic administrative discharges for in-hospital use of illicit drugs
- Writing article for *The Hospitalist* about practical use of MOUD in the hospital including in presence of acute moderate-severe pain
- Presenting at AMERSA in October about treating incarcerated patients with MOUD

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Rural Implications of Bell Scholar Program

A Scholar Program: Sustaining and Growing the Impact Long-Term

- Each scholar to date is sustaining and growing their SUD and MOUD initiatives
- Each scholar teaches medical students and residents and treats rural patients
- Improving the standard of OUD care and the health literacy of rural patients.
- Rural patients talk amongst themselves and they like their UK doctor and often travel if needed or seek out a UK-trained doc in or near their community
- Some scholars have become advocates for policy and practice change with the health care system – this can have even more long – lasting changes

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Acknowledgements

- The Bell Family for their contributions and creation of the Bell Endowed Chair
- The Bell Scholars, the UK students/trainees and our patients
- The University of Kentucky College of Medicine
- KORE funding for our Addiction Consult Service and First Bridge Clinic and addiction educational mission: The Kentucky Cabinet for Behavioral Health and Developmental and Intellectual Disabilities
- University of Kentucky HealthCare